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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/917,748 | 07/31/2001 | Atsuko Ohara | 826.1739 | 2775 |
| 21171 | 7590 | 09/19/2005 | EXAMINER | |
| STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005 | | | LE, BRIAN Q | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2623 | |

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/917,748

Applicant(s)

OHARA ET AL

Examiner

Brian Q. Le

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 9-12, 19, 21, 23 and 25 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 7, 8, 14, 15, 17, 18, 22 and 24 is/are allowed.
- 6) ☒ Claim(s) 2-6, 13, 16 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment and Arguments

1. Applicant's amendment filed June 10, 2005, has been entered and made of record.
2. Applicant's arguments with regard to claims 1-8, 13-18, 20, 22, and 24 have been fully considered, but are not considered persuasive because of the following reasons:

Regarding claim 16, the Applicant argues (top of page 10) that Hongo Reference, US 4,903,316 does not teach the feature of a determining device determining whether a targeted pixel is a background pixel during a first binarization and a subsequent binarization of the targeted pixel based upon that determination. The Examiner respectfully disagrees. Hongo teaches this limitation at column 2, lines 20-25; column 3, lines 45-60; column 8, lines 14-17; column 11, lines 20-30; column 12, lines 20-23; and FIG. 22. Hongo teaches the binarization is performed on the target pixel is base on judgement as to whether each pixel is a character line pixel. Thus the binarization processing will continue until it process all the sub-windows which can be 3x3 or any sizes which clearly can be interpreted as subsequent binarization based upon the determination/judgement whether each pixel is a character line pixel.

For claim 13, the Applicant argues (page 11) that Imaizumi Reference, US 6,633,406 does not teach a binarization on pixels if the pixels are determined to be white. The Examiner respectfully disagrees. Imaizumi teaches this concept column 7, lines 1-14 wherein the method will binarize value of pixel to white pixel if the pixel is consider to be white, that is, under a certain threshold.

Thus, the rejections of all of the claims are maintained.

3. Applicant's arguments, see "Remarks", filed June 10, 2005, with respect to the rejection(s) of claim(s) 13 under 35 U.S.C 102(b) using reference U.S. Patent No. 5,153,925 to

Art Unit: 2623

Tanioka et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Katayama et al. U.S. Patent 5,086,484.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 20 is drawn to a computer data signal embodied on a **carrier**, which is non-statutory. A carrier is indefinite. "A carrier" should be changed to "a computer readable medium" or the equivalent is suggested.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 2-6, and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claims 2-6, the terms "collapsed image" and "patchy binary image" are not

Art Unit: 2623

supported in the original specification. One skilled in the art does not understand these terms.

The Applicant needs to cite the support where it provides the definition for these terminologies.

Referring to claim 13, the Applicant also needs to show the support for the limitation (please provide exact page and line number) wherein an apparatus will binarize a targeted pixel multiple times if it is determined to be white.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,903,316 to Hongo et al. (hereinafter “Hongo”).

Regarding claim 16, Hongo discloses an image processing apparatus, comprising:

a determination device determining whether a target pixel is a background based on complexity of a pattern in a vicinal area of a target pixel during local binarization of a multiple-valued image (column 2, lines 19-25; Fig. 1, elements 6-12);

a binarization device performing again a local binarization of the target pixel based on a determination result of said determination device (column 3, lines 45-46; column 4, lines 40-43; Fig. 1, element 17)(Hongo teaches this limitation at column 2, lines 20-25; column 3, lines 45-60; column 8, lines 14-17; column 11, lines 20-30; column 12, lines 20-23; and FIG. 22. Hongo

Art Unit: 2623

teaches the binarization is performed on the target pixel is base on judgement as to whether each pixel is a character line pixel. Thus the binarization processing will continue until it process all the sub-windows which can be 3x3 or any sizes which clearly can be interpreted as subsequent binarization based upon the determination/judgement whether each pixel is a character line pixel.); and

an output device outputting a process result of said binarization device (Fig.1, output of element 17; a device is implied, e.g.).

10. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,086,484 to Katayama et al. (hereinafter "Katayama").

As to claim 13, Katayama discloses an image processing apparatus (abstract), comprising:

a first binarization device performing a local binarization on a multiple-valued image (column 3, lines 1-10; column 6, lines 1-10);

a second binarization device performing local binarization again on pixels which are determined as white pixels in a vicinal area of a target pixel when the target pixel is determined as a white pixel by the local binarization performed by said first binarization device (column 1, lines 50-55; column 3, lines 50-58 and FIG. 29); and

an output device outputting a process result of said second binarization device (Fig.9, element 9).

11. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,633,406 to Imaizumi et al. (hereinafter "Imaizumi").

Art Unit: 2623

As to claim 13, Imaizumi discloses an image processing apparatus, comprising:

a first binarization device performing a local binarization on a multiple-valued image (column 3, lines 24-26; Fig.1);

a second binarization device performing local binarization again on pixels which are determined as white pixels in a vicinal area of a target pixel when the target pixel is determined as a white pixel by the local binarization performed said first binarization device (column 3, lines 28-31; Fig.1; note that the Imaizumi's second binarization device always performs a second binarization, although with a different threshold, and therefore will perform it on a pixel regarded as a white pixel in a vicinal area of a target pixel when the target pixel is regarded as white pixel in the local binarization by said first binarization device) (Imaizumi teaches this concept column 7, lines 1-14 wherein the method will binarize value of pixel to white pixel if the pixel is consider to be white, that is, under a certain threshold); and

an output device outputting a process result of said second binarization device (e.g., Fig.1, printing unit).

Subject Matter Not Found in the Prior Art

12. The subject matter of claim 20 has not been found in the prior art. However, allowability cannot be indicated because the claim is not directed to statutory subject matter.

Allowable Subject Matter

13. Claims 1, 7, 8, 14-15, 17-18, 22 and 24 are allowed.

14. Claims 2-6 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

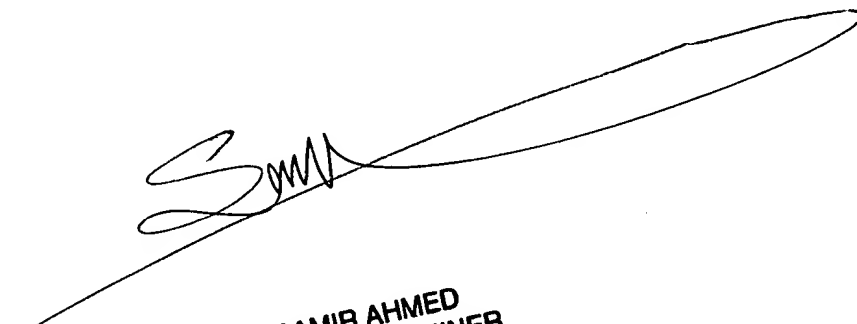
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571-272-7414. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 571-273-8300 for After Final communications.

Art Unit: 2623

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

BL

August 25, 2005



SAMIR AHMED
PRIMARY EXAMINER